U.S. Fish & Wildlife Service

Klamath Falls Fish & Wildlife Office

FY2013 Annual Report

This report provides a sample of the activities completed by the U.S. Fish and Wildlife Service's Klamath Falls Fish and Wildlife Office (KFFWO) in fiscal year 2013 (October 2012-September 2013).

The KFFWO works to conserve fish and wildlife in the Upper Klamath and Goose Lake Basins of south central Oregon and northeast California. The KFFWO coordinates and facilitates conservation efforts through the cooperation and participation of a variety of agencies, organizations, private landowners, and individuals.

One key function of the KFFWO is restoring habitat through the Service's Partners for Fish and Wildlife Program. We work with private landowners on a voluntary basis to develop habitat restoration projects on their lands. Using federal funding and technical assistance, we plan, design and implement projects to benefit fish and wildlife while maintaining the landowners' use of their lands. The National Fish Passage Program also provides significant funding to restoring and protecting fish passage across landownerships. Additionally, small-scale habitat restoration occurs through the Schoolyard Habitat Program to provide education about fish and wildlife.

Another important function of the KFFWO is working with others to carry out the requirements of the Endangered Species Act (ESA). We complete candidate, listing and recovery actions under section 4; work with other federal agencies and non-federal entities to evaluate the effects of their actions to listed species and to provide incidental take permits under sections 7 and 10; and manage grant programs under section 6. We strive to take a proactive approach with our partners to conserve fish and wildlife so additional protections are not needed.

Cover Photos. *Top left: spawning Lost River suckers. Top right: KFFWO biologist trainee Davis Hernandez while surveying. Middle left: KFFWO biologists during an operation to rescue a pelican. Middle right: KFFWO biologist Elizabeth Willy working with Resources and People Camp counselors. Bottom: Oregon spotted frog. All photos USFWS.*

Improving Klamath Basin Water Operations

A new plan to manage irrigation water deliveries in the Klamath Basin is helping to meet the needs of agriculture as well as at-risk fish. In May, the U.S. Fish and Wildlife Service (Service) and the National Marine Fisheries Service (NMFS) completed a joint Biological Opinion (BiOp) on the effects of the ongoing operations of the Bureau of Reclamation's (BOR) Klamath Project (Project), which provides irrigation water for agricultural purposes to 1,400 family farms in the Upper Klamath Basin.

In 2010, when drought hit the Upper Klamath Basin, it resulted in water delivery to Project irrigators of only 150,000 acre-feet, instead of a full delivery of 390,000 acre-feet. In 2013, which was even drier, the operations covered by the new BiOp allowed at least 280,000 acre-feet to be delivered to farmers while meeting the needs of threatened and endangered fish. Based on this improvement, affected parties applaud how well the joint BiOp works to partition limited water resources to listed species and farmers.

The joint BiOp culminated three years of coordination among the Service, NMFS, BOR, four tribes, Project irrigators, and PacifiCorp.

The Link River Dam just below Upper Klamath Lake/USFWS

Greg Addington, executive director of the Klamath Water Users Association, which represents Project irrigators, stated that the BiOp should allow them to "manage a block of water and know what (their) supply is at the beginning of a season." This helps farmers and ranchers plan for the year by getting loans for seed and chemicals.

The joint BiOp, completed under the Endangered Species Act, culminated three years of coordination among the Service, NMFS, BOR, four tribes, Project irrigators, and PacifiCorp. The document looks at how water management at a Klamath River Basin-wide scale affects listed Lost River suckers, shortnose suckers and coho salmon. The Service has jurisdiction over the two endangered sucker species, which are endangered, while NMFS has jurisdiction over the coho salmon, which is threatened. In the past, the two federal agencies advised BOR independently. The new joint BiOp eliminates conflicting water requirements for fish.

Previously, BOR based water management on water-supply forecast data and water-use data that were updated once per month. This created difficulty in managing water use for farms because water conditions could change quickly. This also often did not benefit fish because river flows did not have the variability to which they had adapted. This problem was corrected in the new BiOp, which uses daily information from a variety of sources, allowing BOR to manage water flow in the Klamath River and water elevations in Upper Klamath Lake that closely mimic natural variations under which the fish evolved.

"I never thought I would do something like that in my career, where two departments, three agencies, four tribes and farmers all came together to do the best they could to address the needs of listed fish while keeping the Klamath Project (irrigation) functional in most years," said Laurie Sada, field supervisor at the Klamath Falls Fish and Wildlife Office. "It was one of the most rewarding experiences in my life, the day I sat down and signed the joint biological opinion."

The BiOp addresses operation of the Project, which is just one piece of the complex water use puzzle, so work continues in the Klamath Basin to address additional issues related to water use and habitat.

2013 Habitat Projects

Through the Partners for Fish and Wildlife Program, the KFFWO worked on more than 50 restoration and enhancement projects in fiscal year 2013, some just beginning and others reaching completion. New funding of $604,800 was directed to 31 projects through voluntary agreements with private landowners. Work was completed on 27 ongoing and new projects. In addition, the KFFWO brought in $172,500 of National Fish Passage Program (NFFP) funding, 23 percent of the U.S. Fish and Wildlife Service's FY13 NFFP funding for the region, to restore habitat for bull trout and redband trout.

Results of this work included:

- 472 acres of wetlands
- 825 acres of uplands
- 7.5 miles of instream
- 8 miles of riparian (adjacent to water)
- 5 fish barriers (removal)

The KFFWO also provided funding for three new and three continuing Schoolyard Habitat (SYH) projects, primarily through regional SYH funds, outside grants, and other support. One key SYH accomplishment was the grand opening of the Schoolyard Habitat and Outdoor Classroom at the Oregon Institute of Technology in Klamath Falls.

Through the combined efforts of these multiple programs, the KFFWO was able to commit nearly $800,000 to on-the-ground habitat restoration work. Many of the partners provided match to these funds through labor, materials and funding, which more than doubles the value of these funds.

Habitat restoration work is designed to provide stream restoration, fish passage improvement, fencing of sensitive areas, wetland and water quality improvements, replanting of river corridors, and small-scale habitats for education.

Stream restoration, including large wood placement at the Pine Mountain Cattle Co. property/USFWS

Planting Day with Fly Casters

The Klamath Country Fly Casters (KCFC) and KFFWO gathered May 4, 2013, at Deming Ranch Land and Cattle to plant nearly 500 native seedlings on the recently restored floodplain of the South Fork Sprague River.

Early on Saturday morning, vehicle after vehicle of volunteers began pulling into the restoration site near Bly, Ore. Volunteers planted, watered, and caged the new willows, alders, chokecherrys, dogwood, serviceberry and other species along both sides of the 1.3 mile stretch of the South Fork Sprague River. In addition to the 500 plants, the workers placed hundreds of sedge plugs along the banks and seeded the area with native blue rye. The vegetation will help stabilize the banks and provide shade to enhance wildlife habitat.

One Fly Caster was overheard saying, "We like helping out on these projects because it benefits the fishery."

Everyone worked hard and completed the work by noon. The landowners provided a wonderful barbecue lunch to thank the volunteers for their cooperation and dedication. The landowners complimented the efforts, saying they were impressed by the number of volunteers who came to help with the restoration effort.

"The Fly Casters are some of the best volunteers for conservation efforts here in the basin," added Sue Mattenberger, a KFFWO biologist who has led the project.

The planting project was made possible with funding from the KCFC and Oregon Council of the Federation of Fly Fishers, with match provided by the landowners and the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program.

Photos showing the work done on May 4, 2013/USFWS

Sucker Recovery Plan

The KFFWO announced on April 15 the release of a final revised recovery plan for the endangered Lost River and shortnose suckers.

Recovery plans are guidance documents required by the Endangered Species Act (ESA) for all listed species. Recovery plans provide structure and ensure use of sound science in decision making so species can recover and no longer need Endangered Species Act protection. The revised recovery plan is based on an increased amount of information and builds upon many recovery actions taken to date.

The revised recovery plan led to establishment of a Recovery Implementation Team later in the year. This team includes representatives from various entities in California and Oregon. The team is designed as a collaborative effort that improves sucker coordination, ensures that recovery priorities are addressed, and leverages available resources.

"The final revised recovery plan outlines strategies to reduce Lost River and shortnose sucker mortality, restore habitat, increase connectivity between spawning and rearing habitats, and improve water quality," said Laurie Sada, field supervisor of the KFFWO. These strategies are based on criteria that need to be met for the suckers to be downlisted to threatened or de-listed and no longer require ESA protections.

While recent conservation efforts have helped to prevent the suckers from extinction, they continue to face serious threats. Data indicate that more than 10 years have passed since a substantial amount of individuals joined the adult population in Upper Klamath Lake for both species.

The revised recovery plan calls for a controlled propagation program as a last resort to protect the

Spawning Lost River suckers/ USFWS

species from extinction. Although artificial propagation programs have some risks because the fish are not raised in their natural environment, these programs have likely helped related fish species. The KFFWO has received initial funding to begin preparing for propagation.

Estimates for achieving recovery are roughly $135 million. If actions in the recovery plan are successful, the suckers could recover in five to seven generations, or roughly 30 to 50 years.

The updated recovery plan replaces the original plan published in 1993 and is available at www.fws.gov/KlamathFallsFWO.

Developing Youth

In 2013, the KFFWO worked with community partners to provide a summer internship program that allowed for exploration of natural resource careers. The program was targeted toward individuals who typically have less access to career development.

The YMCA hosted the three interns, who were recruited at the Resources and People (RAP) Camp, which was held for a week at Lake of the Woods in Klamath County, Ore. RAP Camp allows high school students to participate in a week-long outdoor residential camp that builds awareness of careers in natural resources through outdoor activities.

The KFFWO received funding for the internship program through the U.S. Fish and Wildlife Service's Diversity and Civil Rights office and a grant from the National Conservation Training Center. One of the interns was a member of the Klamath Tribes.

The KFFWO worked with several community partners to engage, educate, and employ the program participants. The interns developed skills in interviewing, resume building, and career guidance. They also gained life skills such as responsibility; communication; nutrition and wellness; professional behavior; leadership skills; team building; and problem solving.

The interns worked as camp counselors for younger children, banded ducks, mapped vegetation, built wildlife habitat,

2013 Summer Internship Program Participants/USFWS

monitored water quality, surveyed fish, maintained trails, rehabilitated wildlife, and controlled weeds.

Oregon Spotted Frog

On September 18, the KFFWO hosted an Oregon spotted frog workshop to provide information, discuss input from participants, and visit sites where the frogs can be found. The workshop provided an opportunity to work with those who are interested in the future of the Oregon spotted frog.

The workshop followed the August 29 proposal by the U.S. Fish and Wildlife Service to list the Oregon spotted frog as threatened under the Endangered Species Act. The proposal is part of an effort to keep the Oregon spotted frog from becoming endangered in the foreseeable future. The Service also proposed to designate 68,192 acres and 23 stream miles as critical habitat for the Oregon spotted frog throughout Washington and Oregon. A final decision on the listing and critical habitat will be reached by the end of August 2014.

The KFFWO also took on a major effort to survey for Oregon spotted frogs in 2013 by visiting several sites in Klamath County in Oregon and in Modoc County in California from late March to early May. The KFFWO had a field crew of four interns during the spring and summer through an agreement with the Chicago Botanic Gardens, and two interns worked on frog surveys.

The surveys focused on egg masses because they are relatively easy to find, if timed correctly. Although Oregon spotted frogs once existed in northern California, the field crew found no Oregon spotted frogs there. They did find Oregon spotted frog egg masses in Oregon.

2013 Chicago Botanic Garden Interns and an Oregon spotted frog/USFWS

The surveys took place on both public and private lands where access was voluntarily provided. Several other agencies participated in the surveys, including the Bureau of Land Management, the U.S. Forest Service, the Bureau of Reclamation, and the U.S. Geological Survey.

Population	Site	Date	Egg Masses	Adults	Water Temp.
Wood River	WRW	4/10/2013	123	0	6 - 14°C
	Dixon Rd	4/18/2013	43+	3	0 - 7°C
Annie Creek	Xanterra	4/15/2013	0	0	9°C
Buck Lake	Buck Lake	4/19/2013, 4/23/2013, 4/24/2013	38	0	7 - 16°C
Four mile Creek	Four Mile Creek	4/17/2013	18	0	4 – 10+°C

Klamath County 2013 Oregon Spotted Frog Survey Data

Wocus

The KFFWO is working with the Klamath Tribes and The Nature Conservancy (TNC) on a long-term habitat restoration program for wocus in Upper Klamath Lake.

Wocus, or yellow pond lily (Nuphar lutea sp.), is found in the Upper Klamath Basin, where it benefits many native species, including the federally-listed shortnose sucker and Lost River sucker. In Upper Klamath Lake, wocus can improve water quality by reducing phosphorus and can provide thermal and predatory refuge for juvenile suckers. In addition, the plant is culturally significant because historically it provided a nutritious food staple during hard winter months for the Klamath Tribes, who refer to it as "WOK'SAM." Less than 5% of the populations from 200 years ago are estimated to remain, largely due to changes in land management practices.

The new program aims to restore wocus to lake fringe and wetland habitats, educate the tribal youth about the importance of wocus, and monitor the health of existing and newly established wocus populations. During the first field season in 2013, seven test plot locations were created at the Williamson River Delta Preserve to study the effectiveness of the relocation techniques. Results demonstrated good plant survival, and the techniques will be used for larger scale efforts in 2014.

The KFFWO, TNC, the Klamath Tribes, and tribal high school students will participate in the 2014 planting efforts at the Williamson River Delta. In addition to the large scale planting effort, study plots will be created at Chiloquin High School so high school biology students can monitor the growth of plants and help improve the wocus restoration efforts.

KFFWO biologist John Riens works on the wocus project/USFWS

Fourmile Creek and Harriman Spring

In fall 2013, the KFFWO completed the final phase of a multi-phase project to restore Lower Fourmile Creek for the benefit of endangered Lost River and shortnose suckers.

Harriman Spring and lower reaches of Fourmile Creek provide important habitat for the endangered Lost River and shortnose suckers, as well as redband trout. This spring and creek complex provides important cold water refugia to Upper Klamath Lake and was a significant spawning site for the two endangered sucker species until the 1970s.

Major alterations due to agricultural practices in the 20th Century had adverse impacts to the instream and riparian habitat. Much of Lower Fourmile Creek was channelized and leveed for flood control. The mouth of Fourmile Creek had been relocated into Harriman Spring, and fine sediment had covered important spawning gravels used by suckers.

This project began in 2010 and was completed in three main phases, involving many groups and six private landowners. Several hundred tons of fine sediment were removed to uncover native gravel in Harriman Spring, and the mouth of Fourmile Creek relocated to prevent sediment build-up in the future. A total of 2.9 miles of Lower Fourmile Creek were relocated and/or restored, 0.78 mile of secondary channels reactivated to serve as stream habitat during snowmelt runoff, and 0.3 mile of additional spring outflow channel reactivated.

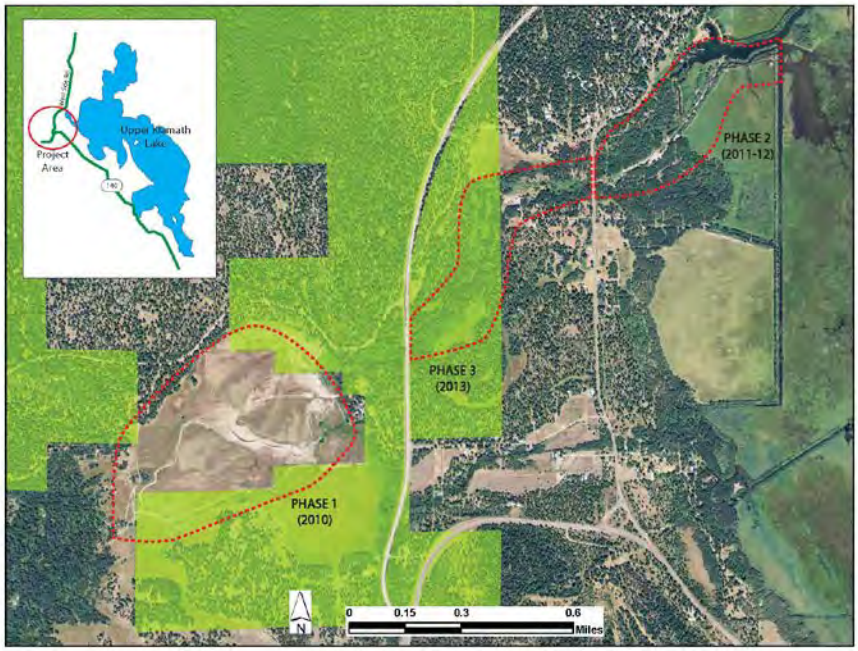
Restoration of the main channel included removal of levees for better floodplain connectivity, re-occupation of historical channels with natural sinuosity and bed elevation. Tree density in as much as 50 acres of forested wetland was reduced to revitalize overgrown aspen stands. Hydrologic function was improved in Lower Fourmile Creek, including complete restoration of a large wet meadow complex.

The project addressed adverse stream alterations in the lower portions of Fourmile; however, a major diversion at Fourmile Lake continues to allow all base flows to be diverted into the Rogue River Basin. The project was designed to accommodate base flows in case they are restored to Fourmile Creek.

“This project is a big step towards restoring sucker spawning to refugial springs along the west side of Upper Klamath Lake,” said Damion Ciotti, the KFFWO’s former project lead.

Ciotti and Hoda Sondossi, the KFFWO lead for the last project phases, developed and implemented the project using state-of-the-art techniques for the assessment and design process, including a survey grade GPS and LiDAR data.

The project was funded by the U.S. Fish and Wildlife Service’s Partners for Fish and Wildlife Program, Oregon Watershed Enhancement Board, Bureau of Reclamation, U.S. Forest Service, and Resource Advisory Committee (RAC) Title II. Project partners included the U.S. Forest Service, Klamath Basin Rangeland Trust, and Klamath Bird Observatory.



Top: A section of Fourmile Creek following restoration/USFWS
Bottom: A map shows the project location and phases of work.

Forest Service Partnership Award

The KFFWO received a partnership award from the U.S. Forest Service on May 22 at the Forest Service's annual regional meeting of fish and watershed program managers, held in Hood River, Oregon.

The recognition acknowledges the collaborative fisheries work of the KFFWO and is part of the Forest Service's national Rise to the Future Watershed Resources Awards. The recognized work includes efforts from both the Ecological Services and Partners for Fish and Wildlife programs.

Phillip Gaines, fishery program manager, for the Fremont-Winema National Forest nominated the KFFWO based on the "phenomenal success" he has experienced in working with various employees in both the Ecological Services and Partners for Fish and Wildlife programs.

"It's a priority of mine to maintain these strong partnerships," Gaines said.

The award nomination described the KFFWO as being "highly networked with many of our external partners and stakeholders," which allows for successful implementation of various watershed restoration projects. The approach has led to accomplishments "far outside of what the Forest could implement on its own," the nomination said.

The nomination highlighted a number of restoration projects, specifically those targeting improvement of habitats and fish passage in the North Fork Sprague River and the Williamson River. Species of concern in these areas include the bull trout, which is listed as threatened under the Endangered Species Act, and the redband trout.

"Working with the Forest Service as well as our other partners to accomplish these projects brings us one step closer to recovering listed species," said Nolan Banish, fish biologist at the KFFWO.

Dan Blake, assistant field supervisor at the KFFWO, attended the awards ceremony to receive the award. At the meeting, he highlighted some of the work that has been achieved jointly by the two agencies.

On the North Fork Sprague River, the cooperators replaced an undersized culvert with a bridge to give fish access to 100 miles of habitat that had been blocked. Other projects included restoration of natural stream conditions to benefit spawning, fish passage, rearing, cover and water quality. Blake noted that partnerships help stretch funds, improve the technical design of projects, and build support for projects in the community.

Blake also highlighted a partnership with the Klamath Basin Rangeland Trust, a non-profit organization based in Klamath Falls that conducts ecological restoration, monitoring, instream flow protection, and landowner assistance. KBRT works collaboratively with both the KFFWO and the Fremont-Winema National Forest. KBRT also received a partnership award at the event.

Top: Dan Blake of the KFFWO receives the award from the Forest Service/USFS
Middle: Instream project work at Williamson River/Spring Creek/USFWS
Bottom: Bridge that replaced a culvert at the North Fork Sprague River/USFWS